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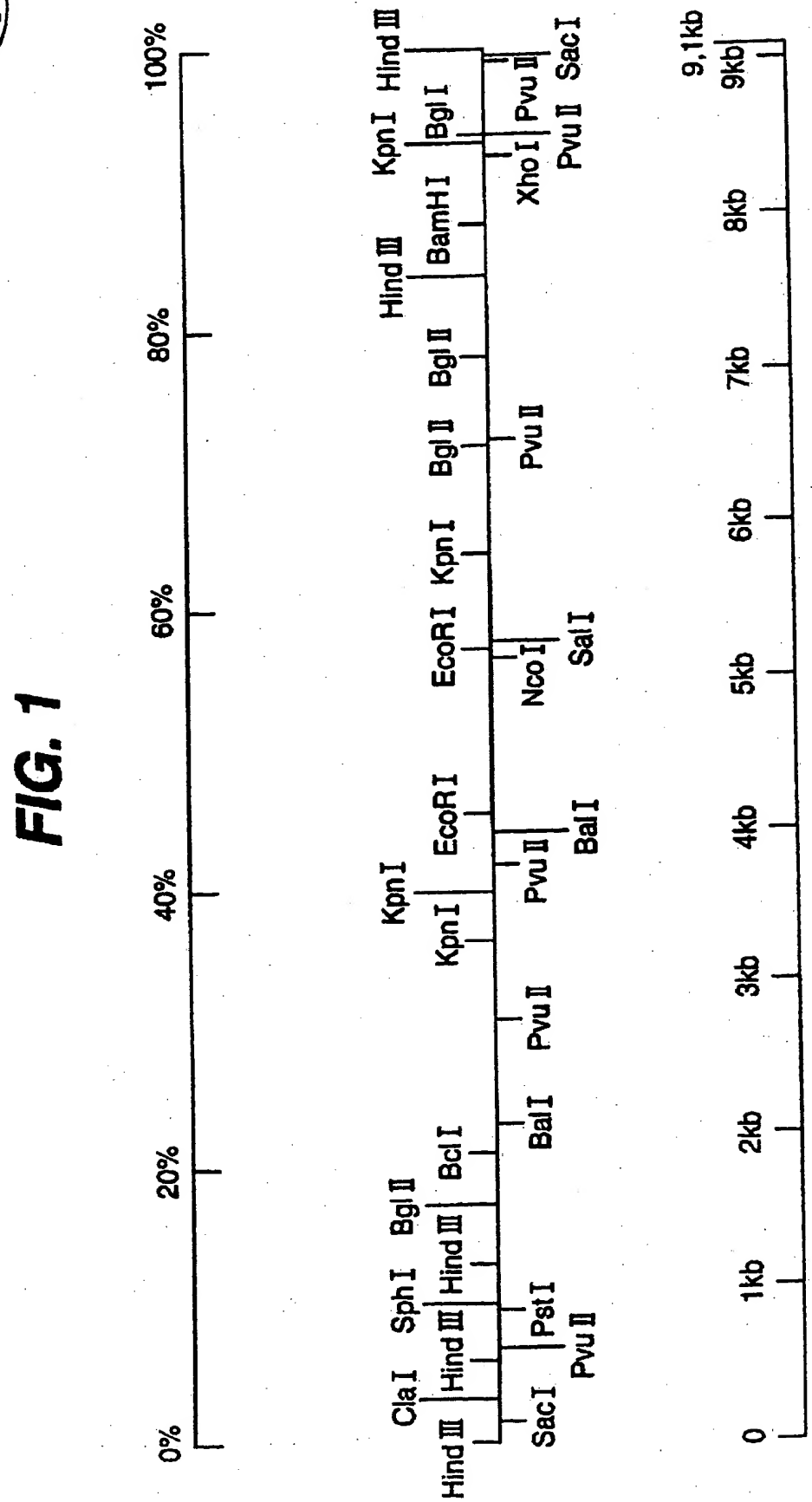
FIG. 1



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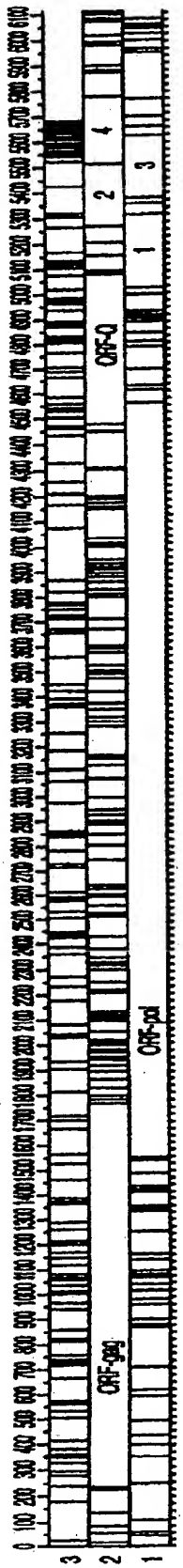

FIG. 2

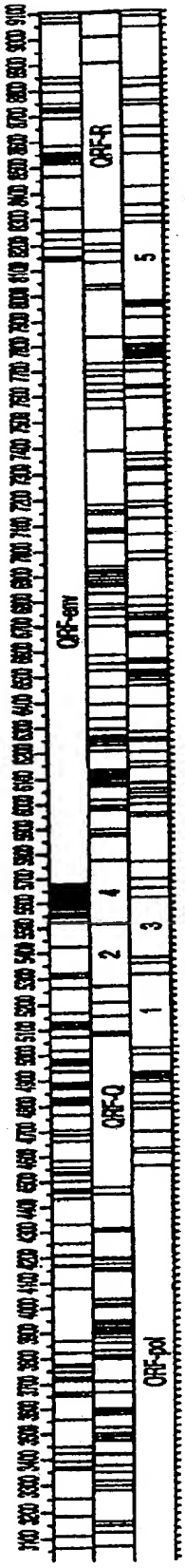

FIG. 3

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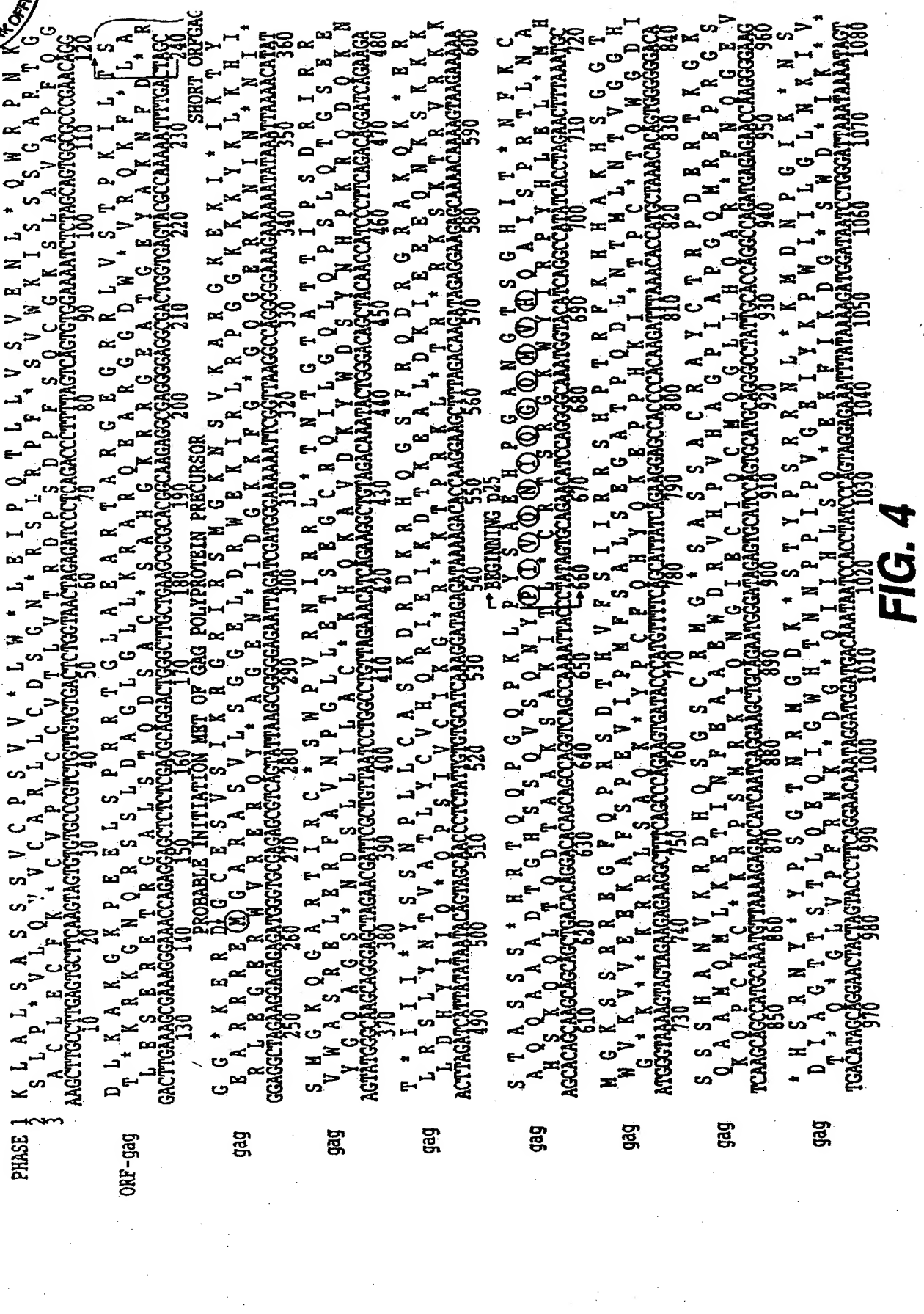

FIG. 4

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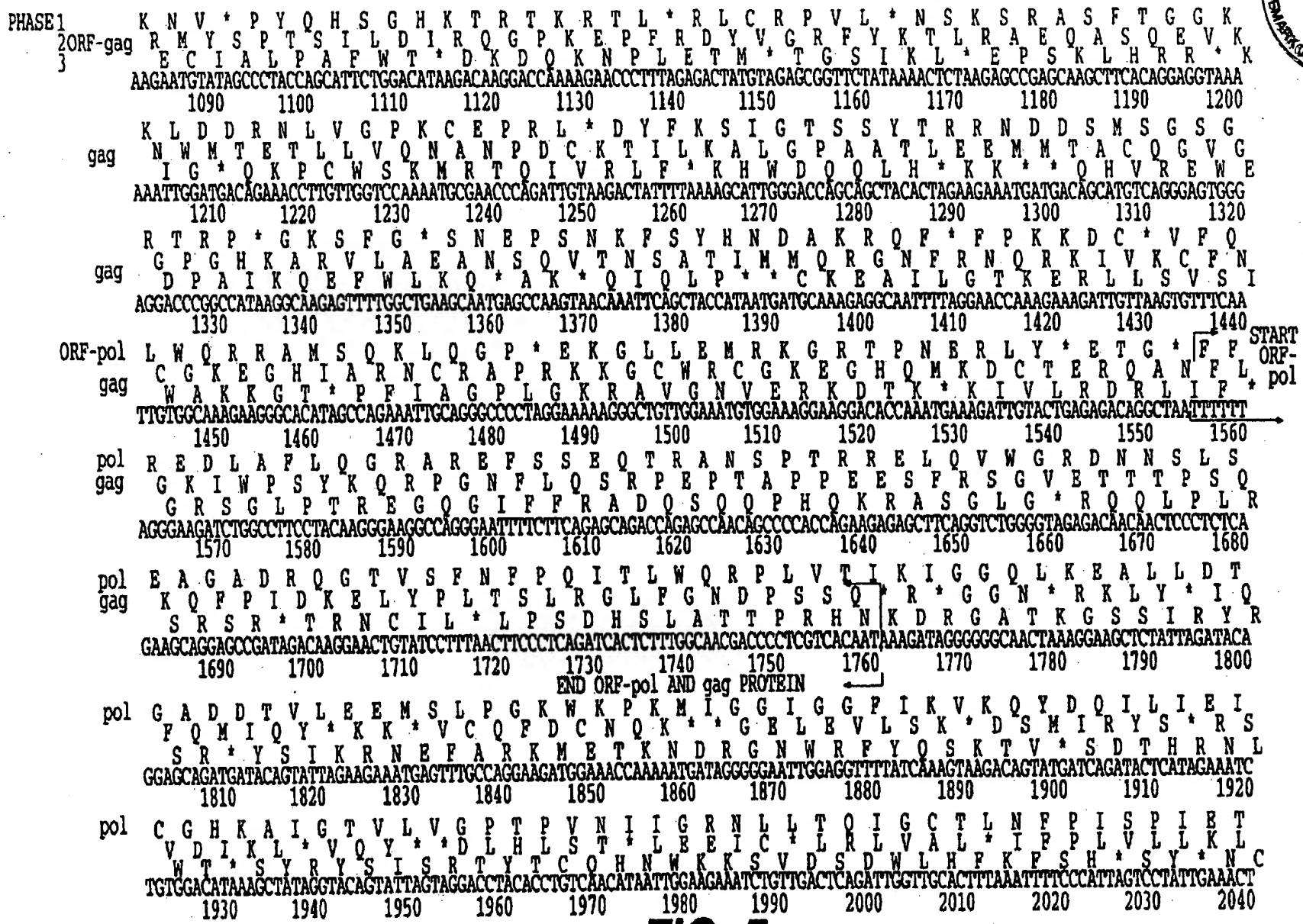

FIG. 5

Replacement Sheet

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Replacement Sheet

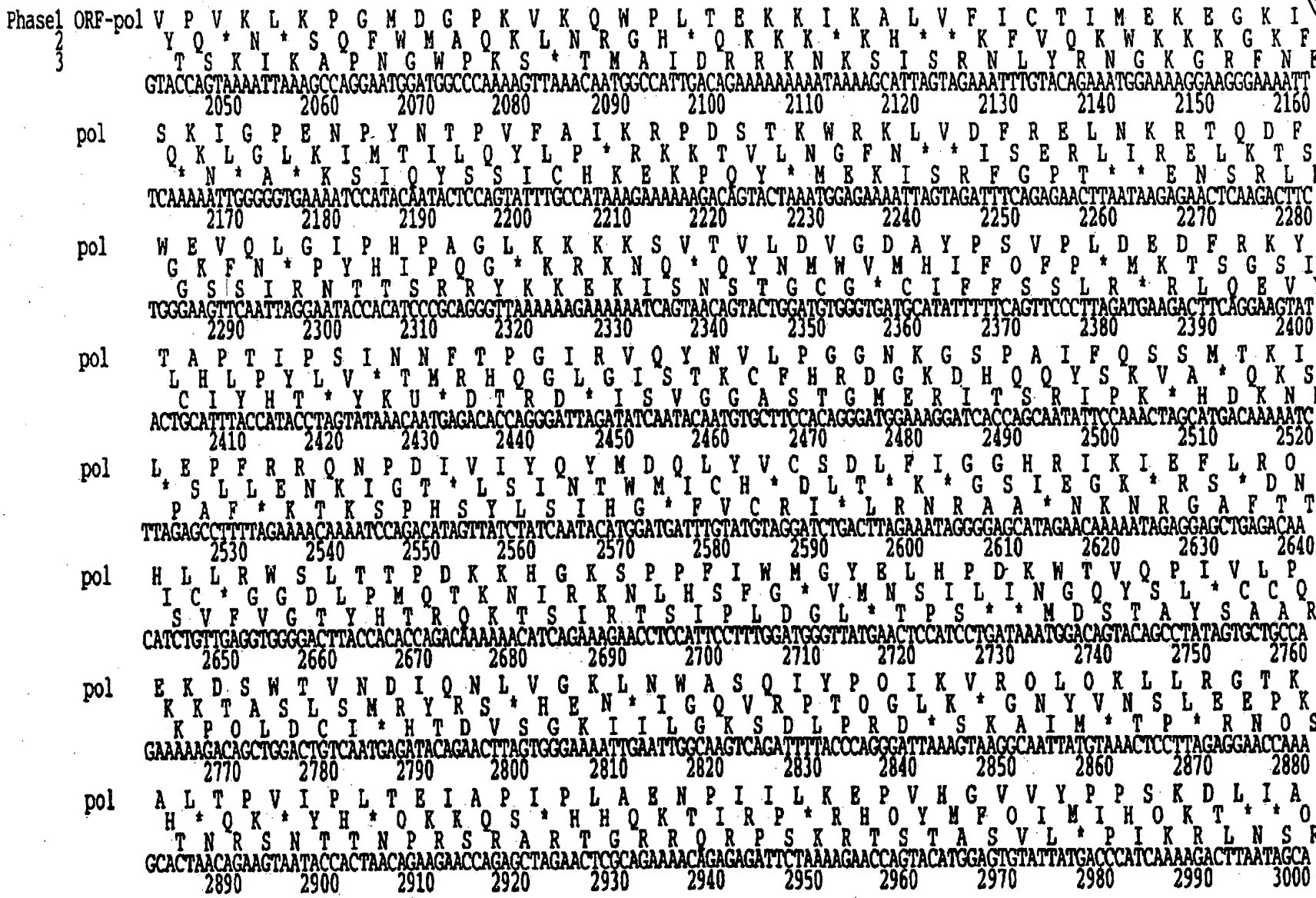

FIG. 6

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FIG. 7

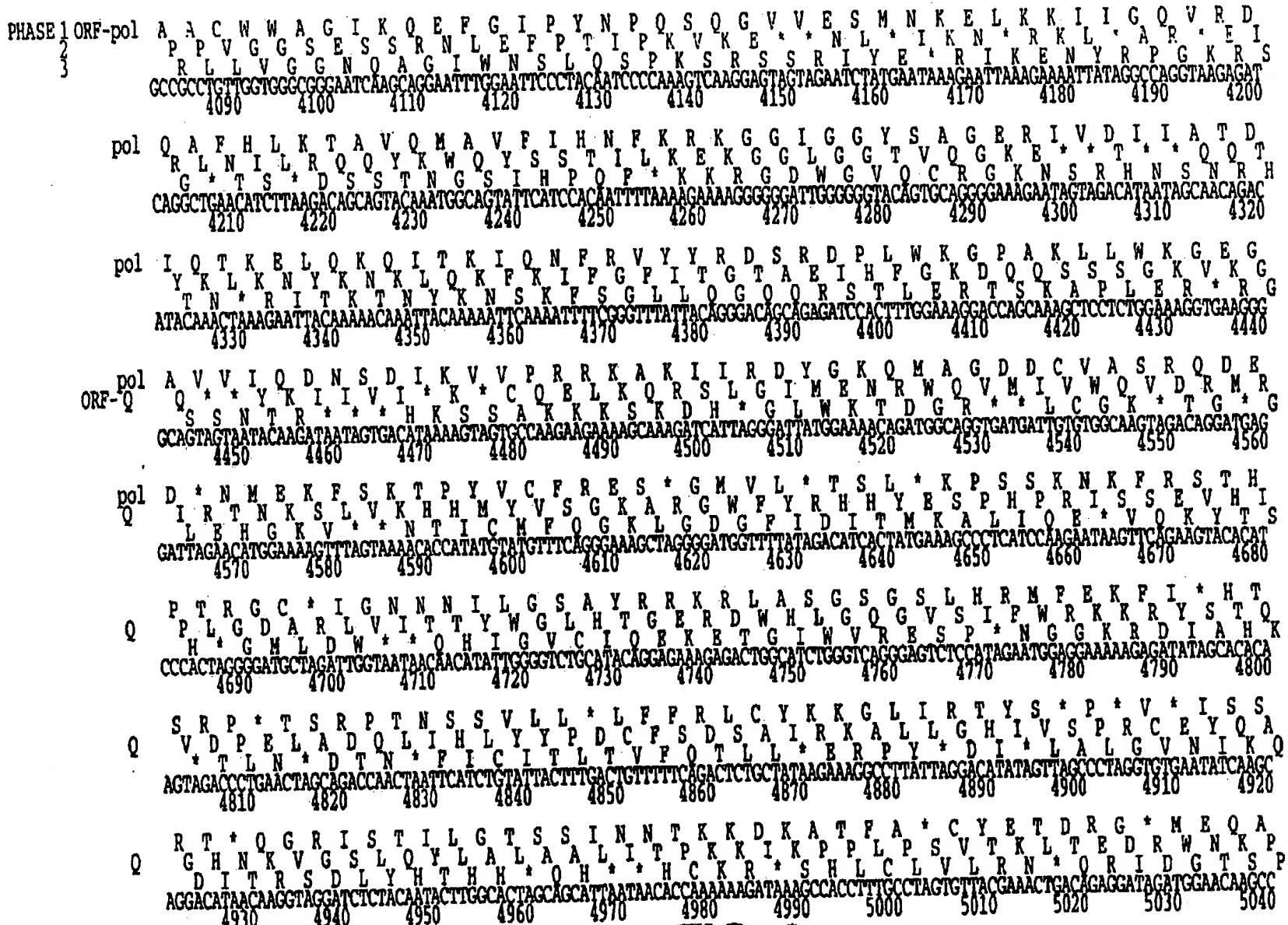

FIG. 8

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Replacement Sheet

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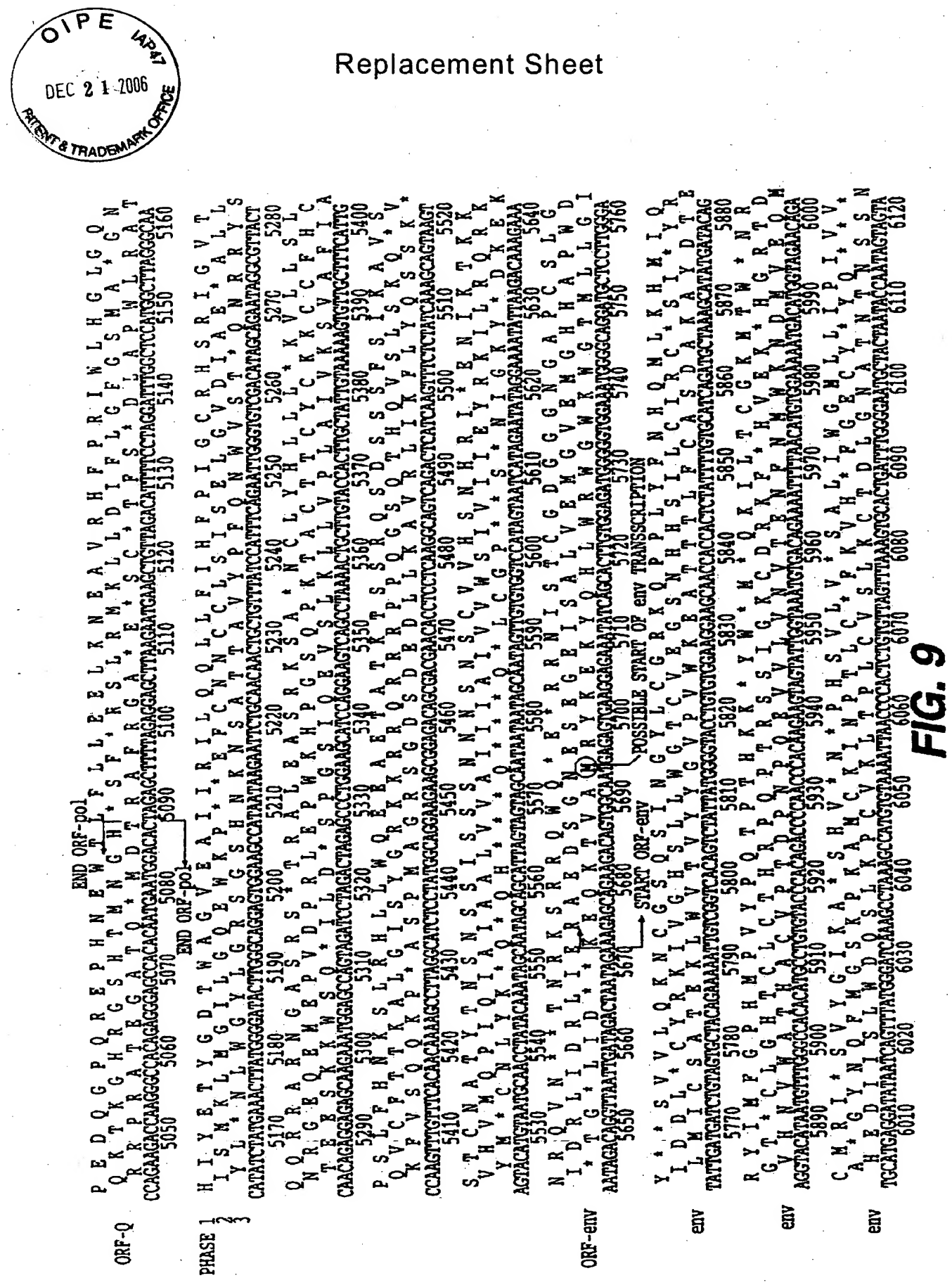

FIG. 9

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FIG. 10

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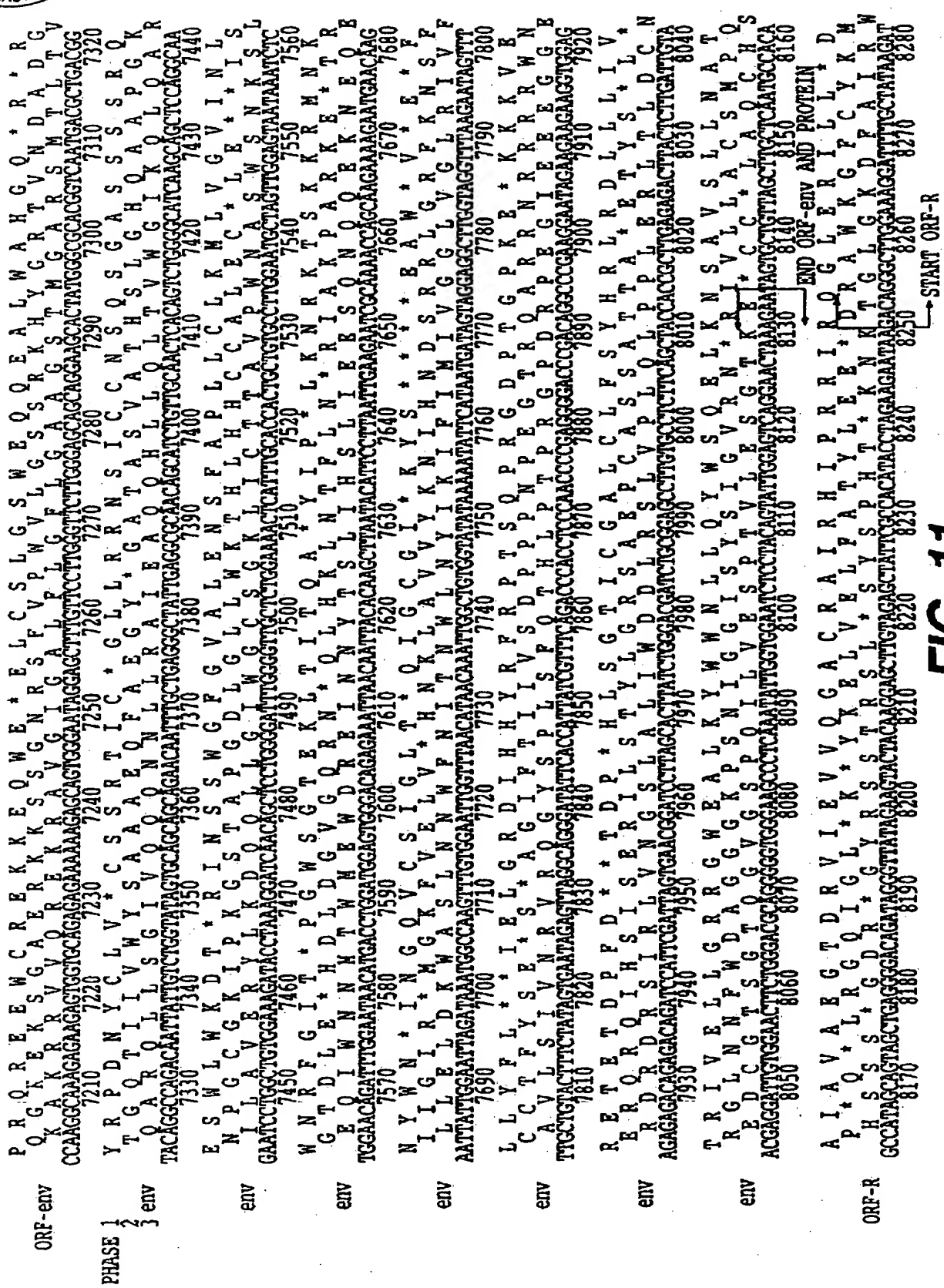

FIG. 11

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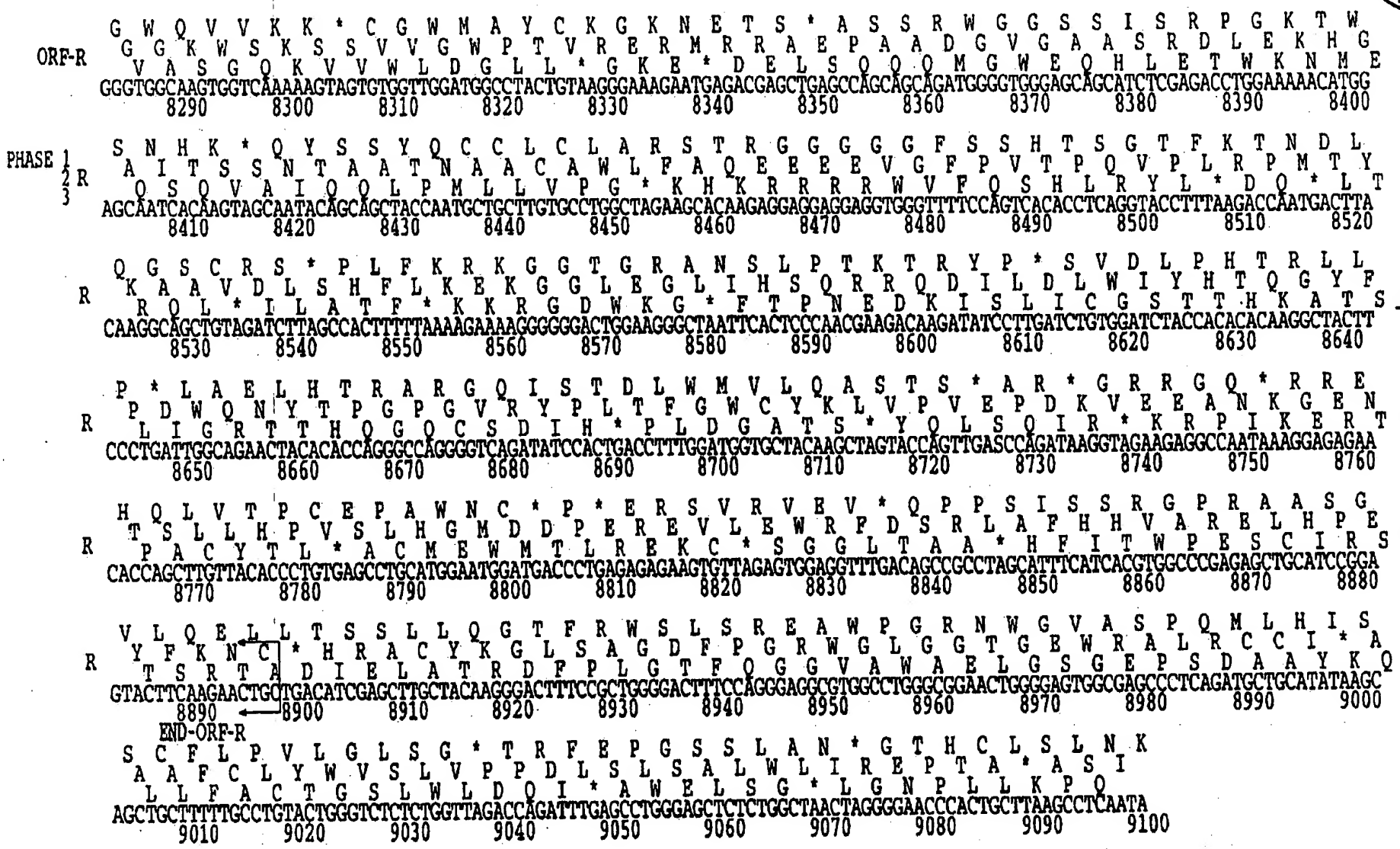

FIG. 12

Replacement Sheet

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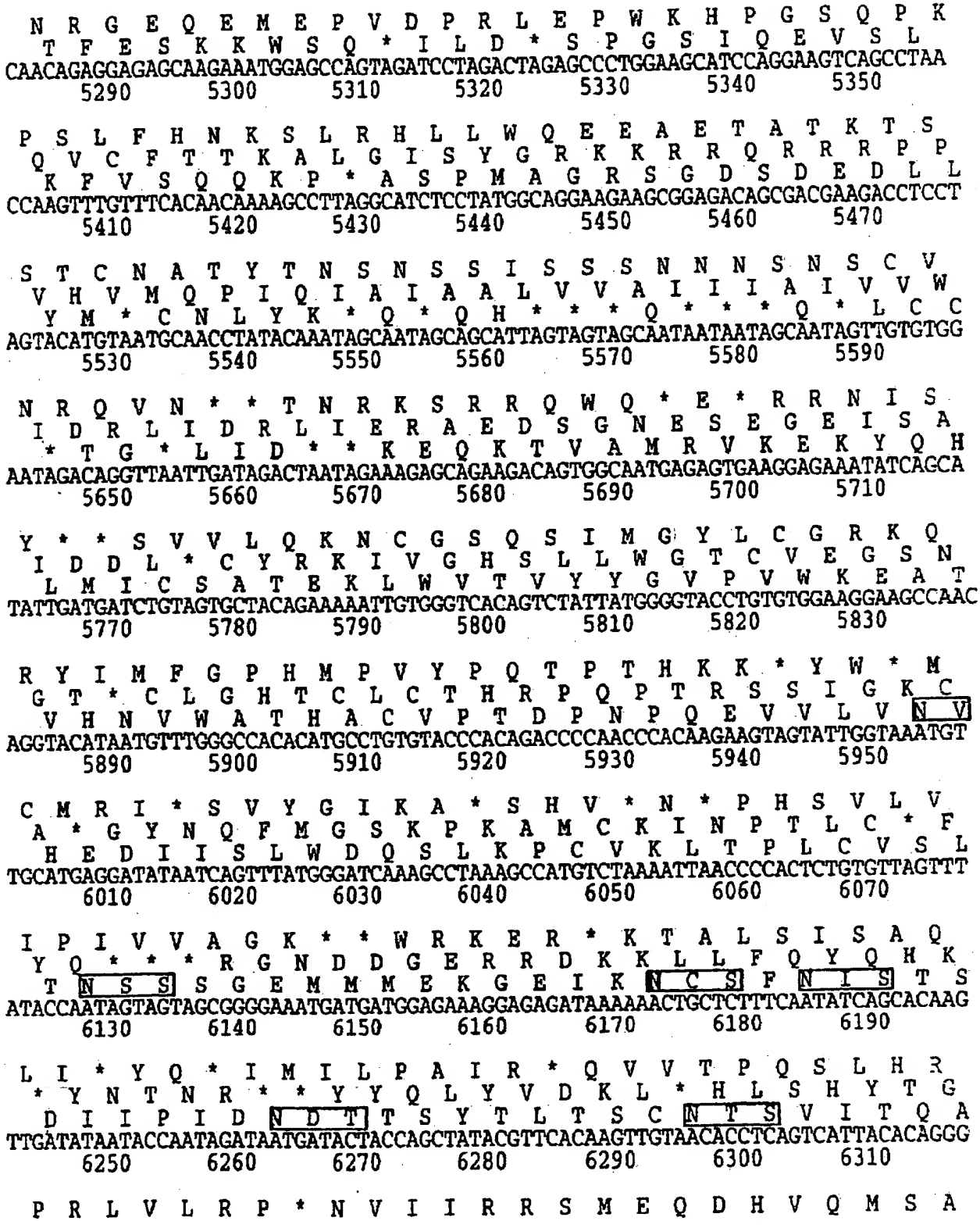

FIG. 13

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```
P  G  S  Q  P  K  T  A  C  I  T  C  Y  C  K  K  C  C  F  H  C
 Q  E  V  S  L  K  L  L  V  P  L  A  I  V  K  S  V  A  F  I  A
CAGGAAGTCAGCCTAAAACTGCTTGTACCACTTGCTATTGTAAAAAGTGTTGCTTTCATTG
        5350       5360       5370       5380       5390       5400

  A  T  K  T  S  S  R  Q  S  D  S  S  S  F  S  I  K  A  V  S
Q  R  R  R  P  P  Q  G  S  Q  T  H  Q  V  S  L  S  K  Q  *  V
 S  D  E  D  L  L  K  A  V  R  L  I  K  F  L  Y  Q  S  S  K  *
AGCGACGAAGACCTCCTCAAGGCAGTCAGACTCATCAAGTTTCTCTATCAAAGCAGTAAGT
        5470       5480       5490       5500       5510       5520

  S  N  S  C  V  V  H  S  N  H  R  I  *  E  N  I  K  T  K  K
I  A  I  V  V  W  S  I  V  I  I  E  Y  R  K  I  L  R  Q  R  K
 *  Q  *  L  C  G  P  *  *  S  *  N  I  G  K  Y  *  D  K  E  K
TAGCAATAGTTGTGTGGTCCATAGTAATCATAGAATATAGGAAAATATTAAGACAAAGAAA
        5590       5600       5610       5620       5630       5640

R  R  N  I  S  T  C  G  D  G  G  G  N  G  A  P  C  S  L  G
  G  E  I  S  A  L  V  E  M  G  V  E  M  G  H  H  A  P  W  D
 K  E  K  Y  Q  H  L  W  R  W  G  W  K  W  G  T  M  L  L  G  I
AAGGAGAAATATCAGCACTTGTGGAGATGGGGGTGGAAATGGGGCACCATGCTCCTTGGGA

        5710       5720       5730       5740       5750       5760

C  G  P  K  Q  P  P  L  Y  F  V  H  Q  M  L  K  H  M  I  Q
 V  E  G  S  N  H  H  S  I  L  C  I  R  C  *  S  I  *  Y  R
V  W  K  E  A  T  T  T  L  F  C  A  S  D  A  K  A  Y  D  T  E
TGTGGAAGGAAGCAACCACCACTCTATTTTGTGCATCAGATGCTAAAGCATATGATACAG
        5830       5840       5850       5860       5870       5880

 *  Y  W  *  M  *  Q  K  I  L  T  C  G  K  M  T  W  *  N  R
  S  I  G  K  C  D  R  K  F  *  H  V  E  K  *  H  G  R  T  D
V  V  L  V  N  V  T  E  N  F  N  M  W  K  N  D  M  V  E  Q  M
TAGTATTGGTAAATGTGACAGAAAATTTTAACATGTGGAAAAATGACATGGTAGAACAGA
        5950       5960       5970       5980       5990       6000

 H  S  V  L  V  *  S  A  L  I  W  G  M  L  L  I  P  I  V  V
  T  L  C  *  F  K  V  H  *  F  G  E  C  Y  *  Y  Q  *  *  *
P  L  C  V  S  L  K  C  T  D  L  G  N  A  T  N  T  N  S  S  N
CACTCTGTGTTAGTTTAAAGTGCACTGATTTGGGGAATGCTACTAATACCAATAGTAGTA
        6070       6080       6090       6100       6110       6120

 S  I  S  A  Q  A  *  E  V  R  C  R  K  N  M  H  F  F  I  N
  Q  Y  Q  H  K  H  K  R  *  G  A  E  R  I  C  I  F  L  *  T
F  N  I  S  T  S  I  R  G  K  V  Q  K  E  Y  A  F  F  Y  K  L
TCAATATCAGCACAAGCATAAGAGGTAAGGTGCAGAAAGAATATGCATTTTTTTATAAAC
        6190       6200       6210       6220       6230       6240

 Q  S  L  H  R  P  V  Q  R  Y  P  L  S  Q  F  P  Y  I  I  V
  S  H  Y  T  G  L  S  K  G  I  L  *  A  N  S  H  T  L  L  C
S  V  I  T  Q  A  C  P  K  V  S  F  E  P  I  P  I  H  Y  C  A
CAGTCATTACACAGGCCTGTCCAAAGGTATCCTTTGAGCCAATTCCCATACATTATTGTG
        6310       6320       6330       6340       6350       6360

 V  Q  M  S  A  Q  Y  N  V  H  M  E  L  G  Q  *  Y  Q  L  N
```

FIG. 14

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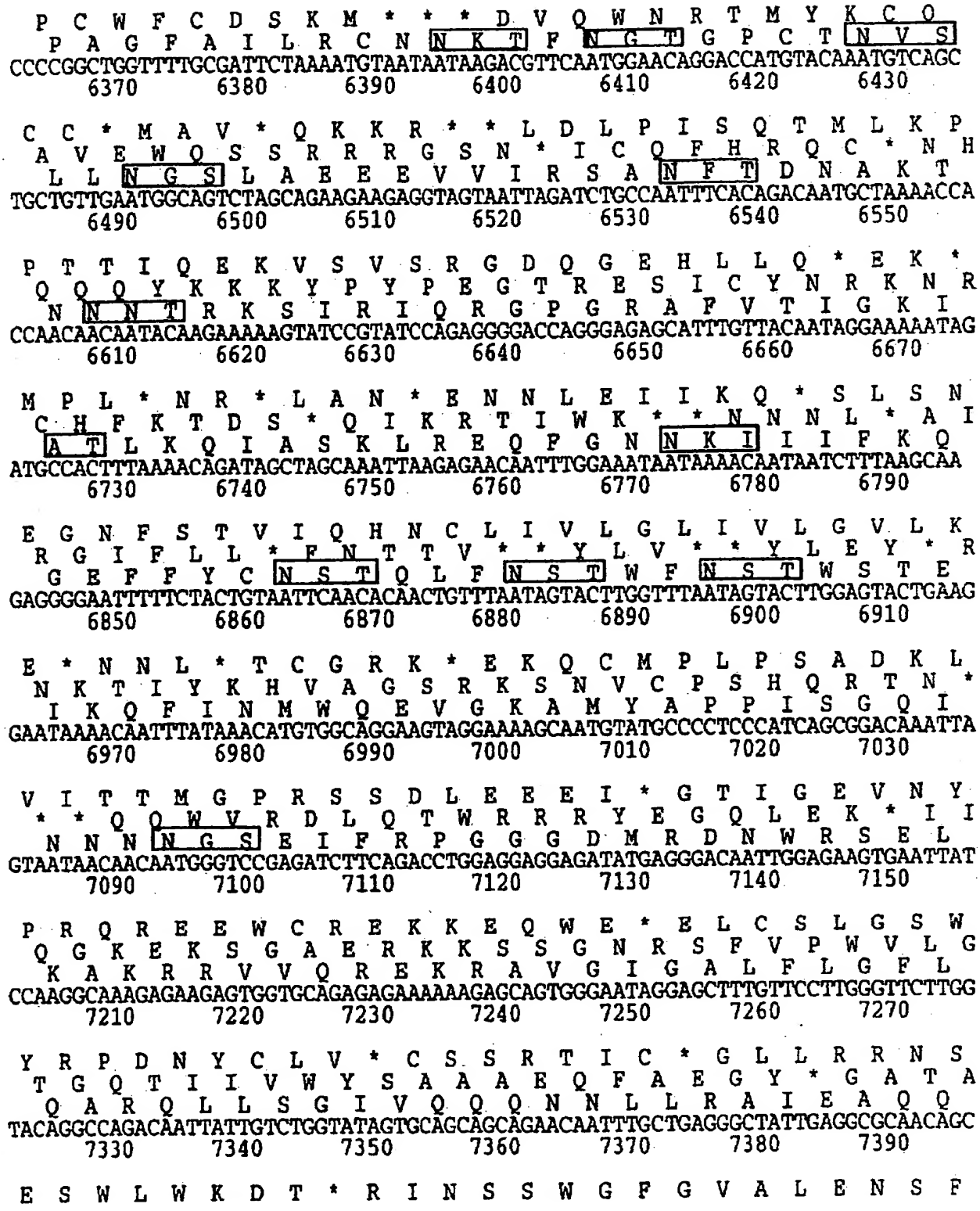

FIG.15

OIPE IAP47
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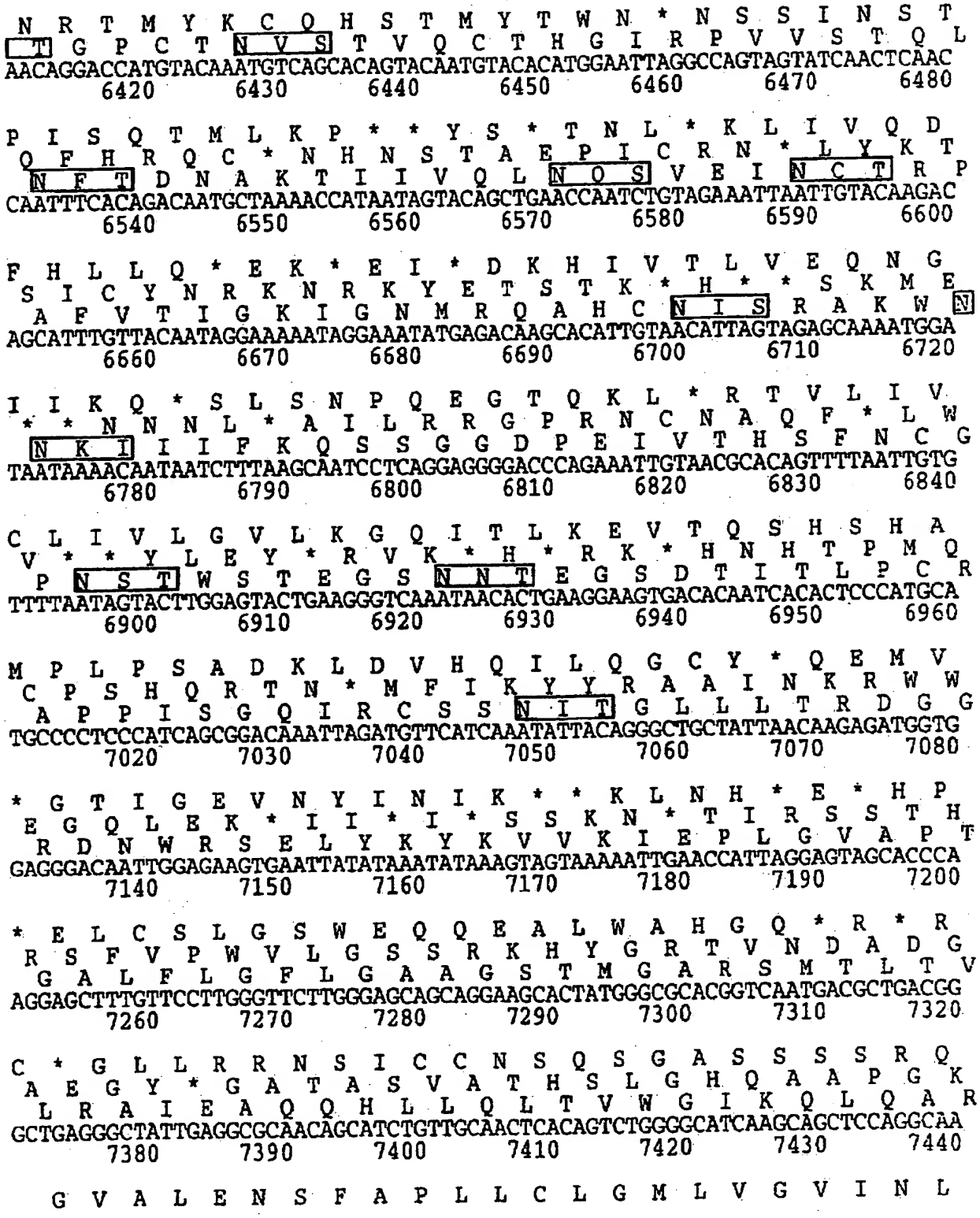

FIG. 16

OIPE IAP47
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```
 N  P  G  C  G  K  I  P  K  G  S  T  A  P  G  D  L  G  L  L  W  K  T  H
  I  L  A  V  E  R  Y  L  K  D  Q  Q  L  L  G  I  W  G  C  S  G  K  L  I
GAATCCTGGCTGTGGAAAGATACCTAAAGGATCAACAGCTCCTGGGGATTTGGGGTTGCTCTGGAAAACTCATI
      7450       7460       7470       7480       7490       7500       7510

 W  N  R  F  G  I  T  *  P  G  W  S  G  T  E  K  L  T  I  T  Q  A  *  Y  I
  G  T  D  L  E  *  H  D  L  D  G  V  G  Q  R  N  *  Q  L  H  K  L  N  T
   E  Q  I  W  N [N  M  T] W  M  E  W  D  R  E  I  N [N  Y  T] S  L  I  H
TGGAACAGATTTGGAATAACATGACCTGGATGGAGTGGGACAGAGAAATTAACAATTACACAAGCTTAATACAT
      7570       7580       7590       7600       7610       7620       7630

 N  Y  W  N  *  I  N  G  Q  V  C  S  I  G  L  T  *  Q  I  G  C  G  I  *  K
  I  I  G  I  R  *  M  G  K  F  V  E  L  V  *  H  N  K  L  A  V  V  Y  K
   L  L  E  L  D  K  W  A  S  L  W  N  W  F [N  I  T] N  W  L  W  Y  I  K
AATTATTGGAATTAGATAAATGGGCAAGTTTGTGGAATTGGTTTAACATAACAAATTGGCTGTGGTATATAAAA
      7690       7700       7710       7720       7730       7740       7750

 L  L  Y  F  L  *  *  I  E  L  G  R  D  I  H  H  Y  R  F  R  P  T  S  Q  P
  C  C  T  F  Y  S  E  *  S  *  A  G  I  F  T  I  I  V  S  D  P  P  P  N
   A  V  L  S  I  V  N  R  V  R  Q  G  Y  S  P  L  S  F  Q  T  H  L  P  T
TTGCTGTACTTTCTATAGTGAATAGAGTTAGGCAGGGATATTCACCATTATCGTTTCAGACCCACCTCCCAACC
      7810       7820       7830       7840       7850       7860       7870

 R  E  T  E  T  D  P  F  D  *  *  T  D  P  *  H  L  S  G  T  I  C  G  A  L
  E  R  Q  R  Q  I  H  S  I  S  E [R  I] L  S  T  Y  L  G  R  S  A  E  P
   R  D  R  D  R  S  I  R  L  V [N  G  S] L  A  L  I  W  D  D  L  R  S  L
AGAGAGACAGAGACAGATCCATTCGATTAGTGAACGGATCCTTAGCACTTATCTGGGACGATCTGCGGAGCCTT
      7930       7940       7950       7960       7970       7980       7990

 T  R  I  V  E  L  L  G  R  R  G  W  E  A  L  K  Y  W  W  N  L  L  Q  Y  W
  R  G  L  W  N  F  W  D  A  G  G  G  K  P  S  N  I  G  G  I  S  Y  S  I
   E  D  C  G  T  S  G  T  Q  G  V  G  S  P  Q  I  L  V  E  S  P  T  V  L
ACGAGGATTGTGGAACTTCTGGGACGCAGGGGGTGGGAAGCCCTCAAATATTGGTGGAATCTCCTACAGTATTC
      8050       8060       8070       8080       8090       8100       8110

 A  I  A  V  A  E  G  T  D  R  V  I  E  V  V  Q  G  A  C  R  A  I  R  H  I
  P  *  Q  *  L  R  G  Q  I  G  L  *  K  *  Y  K  E  L  V  E  L  F  A  T
   H  S  S  S  *  G  D  R  *  G  Y  R  S  S  T  R  S  L  *  S  Y  S  P  H
GCCATAGCAGTAGCTGAGGGGACAGATAGGGTTATAGAAGTAGTACAAGGAGCTTGTAGAGCTATTCGCCACAT
      8170       8180       8190       8200       8210       8220       8230

 G  W  Q  V  V  K  K  *  C  G  W  M  A  Y  C  K  G  K  N  E  T  S  *  A  S
  G  G  K  W  S  K  S  S  V  V  G  W  P  T  V  R  E  R  M  R  R  A  E  P
   V  A  S  G  Q  K  V  V  W  L  D  G  L  L  *  G  K  E  *  D  E  L  S  Q
GGGTGGCAAGTGGTCAAAAAGTAGTGTGGTTGGATGGCCTACTGTAAGGGAAAGAATGAGACGAGCTGAGCCAG
      8290       8300       8310       8320       8330       8340       8350

 S  N  H  K  *  Q  Y  S  S  Y  Q  C  C  L  C  L  A  R  S  T  R  G  G  G  G
  A  I  T  S  S  N  T  A  A  T  N  A  A  C  A  W  L  F  A  Q  E  E  E  E
   Q  S  Q  V  A  I  Q  Q  L  P  M  L  L  V  P  G  *  K  H  K  R  R  R  R
AGCAATCACAAGTAGCAATACAGCAGCTACCAATGCTGCTTGTGCCTGGCTAGAAGCACAAGAGGAGGAGGAGG
      8410       8420       8430       8440       8450       8460       8470

 D  G  S  C  R  S  *  P  L  F  K  R  K  G  G  T  G  R  A  N  S  L  P  I  K
```

FIG. 17

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```
  W K T H L H H C C A L E C * L E * * I S
    G K L I C T T A V P W N A S W S N K S L
CTGGAAAACTCATTTGCACCACTGCTGTGCCTTGGAATGCTAGTTGGAGTAATAAATCTC
      7510      7520      7530      7540      7550      7560

  Q A * Y I P * L K N R K T S K K R M N K
    K L N T F L N * R I A K P A R K E * T R
      S L I H S L I E E S Q N Q Q E K N E Q E
CAAGCTTAATACATTCCTTAATTGAAGAATCGCAAAACCAGCAAGAAAAGAATGAACAAG
      7630      7640      7650      7660      7670      7680

  C G I * K Y S * * * * E A W * V * E * F
    V V Y K N I H N D S R R L G R F K N S F
      W Y I K I F I M I V G G L V G L R I V F
TGTGGTATATAAAAATATTCATAATGATAGTAGGAGGCTTGGTAGGTTTAAGAATAGTTT
      7750      7760      7770      7780      7790      7800

  P T S Q P R G D P T G P K E * K K K V E
    P P P N P E G T R Q A R R N R R R R W R
      H L P T P R G P D R P E G I E E E G G E
CCACCTCCCAACCCCGAGGGGACCCGACAGGCCCGAAGGAATAGAAGAAGAAGGTGGAG
      7870      7880      7890      7900      7910      7920

  I C G A L C L F S Y H R L R D L L L I V
    S A E P C A S S A T T A * E T Y S * L *
      L R S L V P L Q L P P L E R L T L D C N
TCTGCGGAGCCTTGTGCCTCTTCAGCTACCACCGCTTGAGAGACTTACTCTTGATTGTA
      7990      8000      8010      8020      8030      8040

  L L Q Y W S Q E L K N S A V S L L N A T
    S Y S I G V R N * R I V L L A C S M P Q
      P T V L E S G T K E * C C * L A Q C H S
TCCTACAGTATTGGAGTCAGGAACTAAAGAATAGTGCTGTTAGCTTGCTCAATGCCACA
      8110      8120      8130      8140      8150      8160

  A I R H I P R R I R Q G L E R I L L * D
    L F A T Y L E E * D R A W K G F C Y K M
      Y S P H T * K N K T G L G K D F A I R W
CTATTCGCCACATACCTAGAAGAATAAGACAGGGCTTGGAAAGGATTTTGCTATAAGAT
      8230      8240      8250      8260      8270      8280

  T S * A S S R W G G S S I S R P G K T W
    R A E P A A D G V G A A S R D L E K H G
      E L S Q Q Q M G W E Q H L E T W K N M E
CGAGCTGAGCCAGCAGCAGATGGGGTGGGAGCAGCATCTCGAGACCTGGAAAAACATGG
      8350      8360      8370      8380      8390      8400

  Q G G G G G G F S S H T S G T F K T N D L
    E E E E V G F P V T P Q V P L R P M T Y
      R R R R W V F Q S H L R Y L * D Q * L T
GAGGAGGAGGAGGTGGGTTTCCAGTCACACCTCAGGTACCTTTAAGACCAATGACTTA
      8470      8480      8490      8500      8510      8520

  L P T K T R Y P * S V D L P H T R L L
```

FIG. 18

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```
        10          20          30          40          50          60
AAGCTTGCCT TGAGTGCTTC AAGTAGTGTG TGCCCGTCTG TTGTGTGACT CTGGTAACTA
        70          80          90         100         110         120
GAGATCCCTC AGACCCTTTT AGTCAGTGTG GAAAATCTCT AGCAGTGGCG CCCGAACAGG
       130         140         150         160         170         180
GACTTGAAAG CGAAAGGGAA ACCAGAGGAG CTCTCTCGAC GCAGGACTCG GCTTGCTGAA
       190         200         210         220         230         240
GCGCGCACGG CAAGAGGCGA GGGGAGGCGA CTGGTGAGTA CGCCAAAAAT TTTGACTAGC
       250         260         270         280         290         300
GGAGGCTAGA AGGAGAGAGA TGGGTGCGAG AGCGTCAGTA TTAAGCGGGG GAGAATTAGA
       310         320         330         340         350         360
TCGATCGGAA AAAATTCGGT TAAGGCCAGG GGCAAAGAAA AAATATAAAT TAAAACATAT
       370         380         390         400         410         420
AGTATGGGCA AGCAGGGAGC TAGAACGATT CGCTGTTAAT CCTGGCCTGT TAGAAACATC
       430         440         450         460         470         480
AGAAGGCTGT AGACAAATAC TGGGACAGCT ACAACCATCC CTTCAGACAG GATCAGAAGA
       490         500         510         520         530         540
ACTTAGATCA TTATATAATA CAGTAGCAAC CCTCTATTGT GTGCATCAAA GGATAGAGAT
       550         560         570         580         590         600
AAAAGACACC AAGGAAGCTT TAGACAAGAT AGAGGAAGAG CAAAACAAAA GTAAGAAAAA
       610         620         630         640         650         660
AGCACAGCAA GCAGCAGCTG ACACAGGACA CAGCAGCCAG GTCAGCCAAA ATTACCCTAT
       670         680         690         700         710         720
AGTGCAGAAC ATCCAGGGGC AAATGGTACA TCAGGCCATA TCACCTAGAA CTTTAAATGC
       730         740         750         760         770         780
ATGGGTAAAA GTAGTAGAAG AGAAGGCTTT CAGCCCAGAA GTGATACCCA TGTTTTCAGC
       790         800         810         820         830         840
ATTATCAGAA GGAGCCACCC CACAAGATTT AAACACCATG CTAAACACAG TGGGGGGACA
       850         860         870         880         890         900
TCAAGCAGCC ATGCAAATGT TAAAAGAGAC CATCAATGAG GAAGCTGCAG AATGGGATAG
       910         920         930         940         950         960
AGTGCATCCA GTGCATGCAG GGCCTATTGC ACCAGGCCAG ATGAGAGAAC CAAGGGGAAG
       970         980         990        1000        1010        1020
TGACATAGCA GGAACTACTA GTACCCTTCA GGAACAAATA GGATGGATGA CAAATAATCC
      1030        1040        1050        1060        1070        1080
ACCTATCCCA GTAGGAGAAA TTTATAAAAG ATGGATAATC CTGGGATTAA ATAAAATAGT
      1090        1100        1110        1120        1130        1140
```

FIG. 19

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AAGAATGTAT AGCCCTACCA GCATTCTGGA CATAAGACAA GGACCAAAAG AACCCTTTAG
1150 1160 1170 1180 1190 1200
AGACTATGTA GACCGGTTCT ATAAAACTCT AAGAGCCGAG CAAGCTTCAC AGGAGGTAAA
1210 1220 1230 1240 1250 1260
AAATTGGATG ACAGAAACCT TGTTGGTCCA AAATGCGAAC CCAGATTGTA AGACTATTTT
1270 1280 1290 1300 1310 1320
AAAAGCATTG GGACCAGCAG CTACACTAGA AGAAATGATG ACAGCATGTC AGGGAGTGGG
1330 1340 1350 1360 1370 1380
AGGACCCGGC CATAAGGCAA GAGTTTTGGC TGAAGCAATG AGCCAAGTAA CAAATTCAGC
1390 1400 1410 1420 1430 1440
TACCATAATG ATGCAAAGAG GCAATTTTAG GAACCAAAGA AAGATTGTTA AGTGTTTCAA
1450 1460 1470 1480 1490 1500
TTGTGGCAAA GAAGGGCACA TAGCCAGAAA TTGCAGGGCC CCTAGGAAAA AGGGCTGTTG
1510 1520 1530 1540 1550 1560
GAAATGTGGA AAGGAAGGAC ACCAAATGAA AGATTGTACT GAGAGACAGG CTAATTTTTT
1570 1580 1590 1600 1610 1620
AGGGAAGATC TGGCCTTCCT ACAAGGGAAG GCCAGGGAAT TTTCTTCAGA GCAGACCAGA
1630 1640 1650 1660 1670 1680
GCCAACAGCC CCACCAGAAG AGAGCTTCAG GTCTGGGGTA GAGACAACAA CTCCCTCTCA
1690 1700 1710 1720 1730 1740
GAAGCAGGAG CCGATAGACA AGGAACTGTA TCCTTTAACT TCCCTCAGAT CACTCTTTGG
1750 1760 1770 1780 1790 1800
CAACGACCCC TCGTCACAAT AAAGATAGGG GGGCAACTAA AGGAAGCTCT ATTAGATACA
1810 1820 1830 1840 1850 1860
GGAGCAGATG ATACAGTATT AGAAGAAATG AGTTTGCCAG GAAGATGGAA ACCAAAAATG
1870 1880 1890 1900 1910 1920
ATAGGGGGAA TTGGAGGTTT TATCAAAGTA AGACAGTATG ATCAGATACT CATAGAAATC
1930 1940 1950 1960 1970 1980
TGTGGACATA AAGCTATAGG TACAGTATTA GTAGGACCTA CACCTGTCAA CATAATTGGA
1990 2000 2010 2020 2030 2040
AGAAATCTGT TGACTCAGAT TGGTTGCACT TTAAATTTTC CCATTAGTCC TATTGAAACT
2050 2060 2070 2080 2090 2100
GTACCAGTAA AATTAAAGCC AGGAATGGAT GGCCCAAAAG TTAAACAATG GCCATTGACA
2110 2120 2130 2140 2150 2160
GAAGAAAAAA TAAAAGCATT AGTAGAAATT TGTACAGAAA TGGAAAAGGA AGGGAAAATT
2170 2180 2190 2200 2210 2220
TCAAAAATTG GGCCTGAAAA TCCATACAAT ACTCCAGTAT TTGCCATAAA GAAAAAAGAC
2230 2240 2250 2260 2270 2280
AGTACTAAAT GGAGAAAATT AGTAGATTTC AGAGAACTTA ATAAGAGAAC TCAAGACTTC
2290 2300 2310 2320 2330 2340
TGGGAAGTTC AATTAGGAAT ACCACATCCC GCAGGGTTAA AAAAGAAAAA ATCAGTAACA
2350 2360 2370 2380 2390 2400

FIG. 20

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GTACTGGATG TGGGTGATGC ATATTTTTCA GTTCCCTTAG ATGAAGACTT CAGGAAGTAT
2410 2420 2430 2440 2450 2460
ACTGCATTTA CCATACCTAG TATAAACAAT GAGACACCAG GGATTAGATA TCAGTACAAT
2470 2480 2490 2500 2510 2520
GTGCTTCCAC AGGGATGGAA AGGATCACCA GCAATATTCC AAAGTAGCAT GACAAAAATC
2530 2540 2550 2560 2570 2580
TTAGAGCCTT TTAGAAAACA AAATCCAGAC ATAGTTATCT ATCAATACAT GGATGATTTG
2590 2600 2610 2620 2630 2640
TATGTAGGAT CTGACTTAGA AATAGGGCAG CATAGAACAA AAATAGAGGA GCTGAGACAA
2650 2660 2670 2680 2690 2700
CATCTGTTGA GGTGGGGACT TACCACACCA GACAAAAAAC ATCAGAAAGA ACCTCCATTC
2710 2720 2730 2740 2750 2760
CTTTGGATGG GTTATGAACT CCATCCTGAT AAATGGACAG TACAGCCTAT AGTGCTGCCA
2770 2780 2790 2800 2810 2820
GAAAAAGACA GCTGGACTGT CAATGACATA CAGAAGTTAG TGGGAAAATT GAATTGGGCA
2830 2840 2850 2860 2870 2880
AGTCAGATTT ACCCAGGGAT TAAAGTAAGG CAATTATGTA AACTCCTTAG AGGAACCAAA
2890 2900 2910 2920 2930 2940
GCACTAACAG AAGTAATACC ACTAACAGAA GAAGCAGAGC TAGAACTGGC AGAAAACAGA
2950 2960 2970 2980 2990 3000
GAGATTCTAA AAGAACCAGT ACATGGAGTG TATTATGACC CATCAAAAGA CTTAATAGCA
3010 3020 3030 3040 3050 3060
GAAATACAGA AGCAGGGGCA AGGCCAATGG ACATATCAAA TTTATCAAGA GCCATTTAAA
3070 3080 3090 3100 3110 3120
AATCTGAAAA CAGGAAAATA TGCAAGAACG AGGGGTGCCC ACACTAATGA TGTAAAACAA
3130 3140 3150 3160 3170 3180
TTAACAGAGG CAGTGCAAAA AATAACCACA GAAAGCATAG TAATATGGGG AAAGACTCCT
3190 3200 3210 3220 3230 3240
AAATTTAAAC TACCCATACA AAAGGAAACA TGGGAAACAT GGTGGACAGA GTATTGGCAA
3250 3260 3270 3280 3290 3300
GCCACCTGGA TTCCTGAGTG GGAGTTTGTC AATACCCCTC CTTTAGTGAA ATTATGGTAC
3310 3320 3330 3340 3350 3360
CAGTTAGAGA AAGAACCCAT AGTAGGAGCA GAAACGTTCT ATGTAGATGG GGCAGCTAGC
3370 3380 3390 3400 3410 3420
AGGGAGACTA AATTAGGAAA AGCAGGATAT GTTACTAATA GAGGAAGACA AAAAGTTGTC
3430 3440 3450 3460 3470 3480
ACCCTAACTG ACACAACAAA TCAGAAGACT GAGTTACAAG CAATTCATCT AGCTTTGCAG
3490 3500 3510 3520 3530 3540
GATTCGGGAT TAGAAGTAAA TATAGTAACA GACTCACAAT ATGCATTAGG AATCATTCAA
3550 3560 3570 3580 3590 3600
GCACAACCAG ATAAAAGTGA ATCAGAGTTA GTCAATCAAA TAATAGAGCA GTTAATAAAA
3610 3620 3630 3640 3650 3660

FIG. 21

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AAGCAAAAGG TCTATCTGGC ATGGGTACCA GCACACAAAG GAATTGGAGG AAATGAACAA
3670 3680 3690 3700 3710 3720
GTAGATAAAT TAGTCAGTGC TGGAATCAGG AAAGTACTAT TTTTAGATGG AATAGATAAG
3730 3740 3750 3760 3770 3780
GCCCAAGATG AACATGAGAA ATATCACAGT AATTGGAGAG CAATGGCTAG TGATTTTAAC
3790 3800 3810 3820 3830 3840
CTGCCACCTG TAGTAGCAAA AGAAATAGTA GCCAGCTGTG ATAAATGTCA GCTAAAAGGA
3850 3860 3870 3880 3890 3900
GAAGCCATGC ATGGACAAGT AGACTGTAGT CCAGGAATAT GGCAACTAGA TTGTACACAT
3910 3920 3930 3940 3950 3960
TTAGAAGGAA AAGTTATCCT GGTAGCAGTT CATGTAGCCA GTGGATATAT AGAAGCAGAA
3970 3980 3990 4000 4010 4020
GTTATTCCAG CAGAAACAGG GCAGGAAACA GCATACTTTC TTTTAAAATT AGCAGGAAGA
4030 4040 4050 4060 4070 4080
TGGCCAGTAA AAACAATACA TACAGACAAT GGCAGCAATT TCACCAGTAC TACGGTTAAG
4090 4100 4110 4120 4130 4140
GCCGCCTGTT GGTGGGCGGG AATCAAGCAG GAATTTGGAA TTCCCTACAA TCCCCAAAGT
4150 4160 4170 4180 4190 4200
CAAGGAGTAG TAGAATCTAT GAATAAAGAA TTAAAGAAAA TTATAGGCCA GGTAAGAGAT
4210 4220 4230 4240 4250 4260
CAGGCTGAAC ATCTTAAGAC AGCAGTACAA ATGGCAGTAT TCATCCACAA TTTTAAAAGA
4270 4280 4290 4300 4310 4320
AAAGGGGGGA TTGGGGGGTA CAGTGCAGGG GAAAGAATAG TAGACATAAT AGCAACAGAC
4330 4340 4350 4360 4370 4380
ATACAAACTA AAGAATTACA AAAACAAATT ACAAAAATTC AAAATTTTCG GGTTTATTAC
4390 4400 4410 4420 4430 4440
AGGGACAGCA GAGATCCACT TTGGAAAGGA CCAGCAAAGC TCCTCTGGAA AGGTGAAGGG
4450 4460 4470 4480 4490 4500
GCAGTAGTAA TACAAGATAA TAGTGACATA AAAGTAGTGC CAAGAAGAAA AGCAAAGATC
4510 4520 4530 4540 4550 4560
ATTAGGGATT ATGGAAAACA GATGGCAGGT GATGATTGTG TGGCAAGTAG ACAGGATGAG
4570 4580 4590 4600 4610 4620
GATTAGAACA TGGAAAAGTT TAGTAAAACA CCATATGTAT GTTTCAGGGA AAGCTAGGGG
4630 4640 4650 4660 4670 4680
ATGGTTTTAT AGACATCACT ATGAAAGCCC TCATCCAAGA ATAAGTTCAG AAGTACACAT
4690 4700 4710 4720 4730 4740
CCCACTAGGG GATGCTAGAT TGGTAATAAC AACATATTGG GGTCTGCATA CAGGAGAAAG
4750 4760 4770 4780 4790 4800
AGACTGGCAT CTGGGTCAGG GAGTCTCCAT AGAATGGAGG AAAAAGAGAT ATAGCACACA
4810 4820 4830 4840 4850 4860
AGTAGACCCT GAACTAGCAG ACCAACTAAT TCATCTGTAT TACTTTGACT GTTTTTCAGA
4870 4880 4890 4900 4910 4920

FIG. 22

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CTCTGCTATA AGAAAGGCCT TATTAGGACA TATAGTTAGC CCTAGGTGTG AATATCAAGC
4930 4940 4950 4960 2970 2980
AGGACATAAC AAGGTAGGAT CTCTACAATA CTTGGCACTA GCAGCATTAA TAACACCAAA
4990 5000 5010 5020 5030 5040
AAAGATAAAG CCACCTTTGC CTAGTGTTAC GAAACTGACA GAGGATAGAT GGAACAAGCC
5050 5060 5070 5080 5090 5100
CCAGAAGACC AAGGGCCACA GAGGGAGCCA CACAATGAAT GGACACTAGA GCTTTTAGAG
5110 5120 5130 5140 5150 5160
GAGCTTAAGA ATGAAGCTGT TAGACATTTT CCTAGGATTT GGCTCCATGG CTTAGGGCAA
5170 5180 5190 5200 5210 5220
CATATCTATG AAACTTATGG GGATACTTGG GCAGGAGTGG AAGCCATAAT AAGAATTCTG
5230 5240 5250 5260 5270 5280
CAACAACTGC TGTTTATCCA TTTCAGAATT GGGTGTCGAC ATAGCAGAAT AGGCGTTACT
5290 5300 5310 5320 5330 5340
CAACAGAGGA GAGCAAGAAA TGGAGCCAGT AGATCCTAGA CTAGAGCCCT GGAAGCATCC
5350 5360 5370 5380 5390 5400
AGGAAGTCAG CCTAAAACTG CTTGTACCAC TTGCTATTGT AAAAAGTGTT GCTTTCATTG
5410 5420 5430 5440 5450 5460
CCAAGTTTGT TTCACAACAA AAGCCTTAGG CATCTCCTAT GGCAGGAAGA AGCGGAGACA
5470 5480 5490 5500 5510 5520
GCGACGAAGA CCTCCTCAAG GCAGTCAGAC TCATCAAGTT TCTCTATCAA AGCAGTAAGT
5530 5540 5550 5560 5570 5580
AGTACATGTA ATGCAACCTA TACAAATAGC AATAGCAGCA TTAGTAGTAG CAATAATAAT
5590 5600 5610 5620 5630 5640
AGCAATAGTT GTGTGGTCCA TAGTAATCAT AGAATATAGG AAAATATTAA GACAAAGAAA
5650 5660 5670 5680 5690 5700
AATAGACAGG TTAATTGATA GACTAATAGA AAGAGCAGAA GACAGTGGCA ATGAGAGTGA
5710 5720 5730 5740 5750 5760
AGGAGAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA
5770 5780 5790 5800 5810 5820
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTCAC AGTCTATTAT GGGGTACCTG
5830 5840 5850 5860 5870 5880
TGTGGAAGGA AGCAACCACC ACTCTATTTT GTGCATCAGA TGCTAAAGCA TATGATACAG
5890 5900 5910 5920 5930 5940
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG
5950 5960 5970 5980 5990 6000
TAGTATTGGT AAATGTGACA GAAAATTTTA ACATGTGGAA AAATGACATG GTAGAACAGA
6010 6020 6030 6040 6050 6060
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC
6070 6080 6090 6100 6110 6120
CACTCTGTGT TAGTTTAAAG TGCACTGATT TGGGGAATGC TACTAATACC AATAGTAGTA
6130 6140 6150 6160 6170 6180

FIG. 23

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ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT
6190 6200 6210 6220 6230 6240
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC
6250 6260 6270 6280 6290 6300
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT
6310 6320 6330 6340 6350 6360
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTTGAGCC AATTCCCATA CATTATTGTG
6370 6380 6390 6400 6410 6420
CCCCGGCTGG TTTTGCGATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT
6430 6440 6450 6460 6470 6480
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC
6490 6500 6510 6520 6530 6540
TGCTGTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTTCACAG
6550 6560 6570 6580 6590 6600
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC
6610 6620 6630 6640 6650 6660
CCAACAACAA TACAAGAAAA AGTATCCGTA TCCAGAGGGG ACCAGGGAGA GCATTTGTTA
6670 6680 6690 6700 6710 6720
CAATAGGAAA AATAGGAAAT ATGAGACAAG CACATTGTAA CATTAGTAGA GCAAAATGGA
6730 6740 6750 6760 6770 6780
ATGCCACTTT AAAACAGATA GCTAGCAAAT TAAGAGAACA ATTTGGAAAT AATAAAACAA
6790 6800 6810 6820 6830 6840
TAATCTTTAA GCAATCCTCA GGAGGGGACC CAGAAATTGT AACGCACAGT TTTAATTGTG
6850 6860 6870 6880 6890 6900
GAGGGGAATT TTTCTACTGT AATTCAACAC AACTGTTTAA TAGTACTTGG TTTAATAGTA
6910 6920 6930 6940 6950 6960
CTTGGAGTAC TGAAGGGTCA AATAACACTG AAGGAAGTGA CACAATCACA CTCCCATGCA
6970 6980 6990 7000 7010 7020
GAATAAAACA ATTTATAAAC ATGTGGCAGG AAGTAGGAAA AGCAATGTAT GCCCCTCCCA
7030 7040 7050 7060 7070 7080
TCAGCGGACA AATTAGATGT TCATCAAATA TTACAGGGCT GCTATTAACA AGAGATGGTG
7090 7100 7110 7120 7130 7140
GTAATAACAA CAATGGGTCC GAGATCTTCA GACCTGGAGG AGGAGATATG AGGGACAATT
7150 7160 7170 7180 7190 7200
GGAGAAGTGA ATTATATAAA TATAAAGTAG TAAAAATTGA ACCATTAGGA GTAGCACCCA
7210 7220 7230 7240 7250 7260
CCAAGGCAAA GAGAAGAGTG GTGCAGAGAG AAAAAAGAGC AGTGGGAATA GGAGCTTTGT
7270 7280 7290 7300 7310 7320
TCCTTGGGTT CTTGGGAGCA GCAGGAAGCA CTATGGGCGC ACGGTCAATG ACGCTGACGG
7390 7340 7350 7360 7370 7380
TACAGGCCAG ACAATTATTG TCTGGTATAG TGCAGCAGCA GAACAATTTG CTGAGGGCTA
7390 7400 7410 7420 7430 7440

FIG. 24

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TTGAGGCGCA ACAGCATCTG TTGCAACTCA CAGTCTGGGG CATCAAGCAG CTCCAGGCAA
7450 7460 7470 7480 7490 7500
GAATCCTGGC TGTGGAAAGA TACCTAAAGG ATCAACAGCT CCTGGGGATT TGGGGTTGCT
7510 7520 7530 7540 7550 7560
CTGGAAAACT CATTTGCACC ACTGCTGTGC CTTGGAATGC TAGTTGGAGT AATAAATCTC
7570 7580 7590 7600 7610 7620
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAATTACA
7630 7640 7650 7660 7670 7680
CAAGCTTAAT ACATTCCTTA ATTGAAGAAT CGCAAAACCA GCAAGAAAAG AATGAACAAG
7690 7700 7710 7720 7730 7740
AATTATTGGA ATTAGATAAA TGGGCAAGTT TGTGGAATTG GTTTAACATA ACAAATTGGC
7750 7760 7770 7780 7790 7800
TGTGGTATAT AAAAATATTC ATAATGATAG TAGGAGGCTT GCTAGGTTTA AGAATAGTTT
7810 7800 7810 7820 7830 7840
TTGCTGTACT TTCTATAGTG AATAGAGTTA GGCAGGGATA TTCACCATTA TCGTTTCAGA
7870 7880 7890 7900 7910 7920
CCCACCTCCC AACCCCGAGG GGACCCGACA GGCCCGAAGG AATAGAAGAA GAAGGTGGAG
7930 7940 7950 7960 7970 7980
AGAGAGACAG AGACAGATCC ATTCGATTAG TGAACGGATC CTTAGCACTT ATCTGGGACG
7990 8000 8010 8020 8030 8040
ATCTGCGGAG CCTTGTGCCT CTTCAGCTAC CACCGCTTGA GAGACTTACT CTTGATTGTA
8050 8060 8070 8080 8090 8100
ACGAGGATTG TGGAACTTCT GGGACGCAGG GGGTGGGAAG CCCTCAAATA TTGGTGGAAT
8110 8120 8130 8140 8150 8160
CTCCTACAGT ATTGGAGTCA GGAACTAAAG AATAGTGCTG TTAGCTTGCT CAATGCCACA
8170 8180 8190 8200 8210 8220
GCCATAGCAG TAGCTGAGGG GACAGATAGG GTTATAGAAG TAGTACAAGG AGCTTGTAGA
8230 8240 8250 8260 8270 8280
GCTATTCGCC ACATACCTAG AAGAATAAGA CAGGGCTTGG AAAGGATTTT GCTATAAGAT
8290 8300 8310 8320 8330 8340
GGGTGGCAAG TGGTCAAAAA GTAGTGTGGT TGGATGGCCT ACTGTAAGGG AAAGAATGAG
8350 8360 8370 8380 8390 8400
ACGAGCTGAG CCAGCAGCAG ATGGGGTGGG AGCAGCATCT CGAGACCTGG AAAAACATGG
8410 8420 8430 8440 8450 8460
AGCAATCACA AGTAGCAATA CAGCAGCTAC CAATGCTGCT TGTGCCTGGC TAGAAGCACA
8470 8480 8490 8500 8510 8520
AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCAGGTA CCTTTAAGAC CAATGACTTA
8530 8540 8550 8560 8570 8580
CAAGGCAGCT GTAGATCTTA GCCACTTTTT AAAAGAAAAG GGGGGACTGG AAGGGCTAAT
8590 8600 8610 8620 8630 8640
TCACTCCCAA CGAAGACAAG ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT
8650 8660 8670 8680 8690 8700

FIG. 25

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CCCTGATTGG CAGAACTACA CACCAGGGCC AGGGGTCAGA TATCCACTGA CCTTTGGATG
8710 8720 8730 8740 8750 8760
GTGCTACAAG CTAGTACCAG TTGAGCCAGA TAAGGTAGAA GAGGCCAATA AAGGAGAGAA
8770 8780 8790 8800 8810 8820
CACCAGCTTG TTACACCCTG TGAGCCTGCA TGGAATGGAT GACCCTGAGA GAGAAGTGTT
8830 8840 8850 8860 8870 8880
AGAGTGGAGG TTTGACAGCC GCCTAGCATT TCATCACGTG GCCCGAGAGC TGCATCCGGA
8890 8900 8910 8920 8930 8940
GTACTTCAAG AACTGCTGAC ATCGAGCTTG CTACAAGGGA CTTTCCGCTG GGGACTTTCC
8950 8960 8970 8980 8990 9000
AGGGAGGCGT GGCCTGGGCG GAACTGGGGA GTGGCGAGCC CTCAGATGCT GCATATAAGC
9010 9020 9030 9040 9050 9060
AGCTGCTTTT TGCCTGTACT GGGTCTCTCT GGTTAGACCA GATTTGAGCC TGGGAGCTCT
9070 9080 9090 9100 9110 9120
CTGGCTAACT AGGGAACCCA CTGCTTAAGC CTCAATAAAG CTT

FIG. 26